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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,071

01/02/2008

Minoru Shibazaki

1176/320

9742

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04/29/2011

LIU & LIU

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LOS ANGELES, CA 90071

EXAMINER

ARENDT, PAISLEY L

ART UNIT

PAPER NUMBER

2883

NOTIFICATION DATE

DELIVERY MODE

04/29/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/566,071	SHIBAZAKI, MINORU	
	Examiner	Art Unit	
	PAISLEY L. ARENDT	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 February 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2 and 4-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 February 2011 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings were received on February 25, 2011. These drawings are acceptable.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. **Claims 1, 2, 4, 5, 8 and 9** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al. (US 2002/0089623 A1) in view of Ha et al. (US 2001/0017679 A1), both of record in the IDS.

Regarding **claim 1**, Moon discloses a transfective liquid crystal display device (Fig. 8) having a liquid crystal panel (72-79, Fig. 8) in which liquid crystal material (78, Fig. 8) is sealed between a pair of substrates (72 and 79, Fig. 8) faced with each other and in which pixels (para. [0072]) formed on one substrate of said pair of substrates have transmissive regions (regions without 74-77, Fig. 8) and reflective regions (regions with 74-77, Fig. 8), comprising:

a pair of circularly polarized light members (71 and 80+81, Fig. 8) arranged outside said liquid crystal panel; and

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a backlight (92, Fig. 8) arranged outside one circularly polarized light member of said pair of circularly polarized light members,

wherein said reflective region has a reflective member (75, Fig. 8) for reflecting ambient light from an opposite side of [a] backlight-arranging side in said liquid crystal panel (para. [0073]), and said reflective region has [a] phase difference forming means (74-77, Fig. 8),

wherein said pair of substrates comprise a first substrate (72, Fig. 8) on the backlight-arranging side and a second substrate (79, Fig. 8) away from the backlight-arranging side, and

wherein said phase difference forming means comprises a retarder (74, Fig. 8) and a stepwise member (any or all of 74-77, Fig. 8, are considered a stepwise member) on said first substrate.

Moon fails to explicitly disclose the retarder and the stepwise member are on opposite sides of said first substrate.

However, Ha discloses a transfective liquid crystal display device (Fig. 5) wherein a retarder (113, Fig. 5) and a stepwise member (see 107, Fig. 5) are on opposite sides of a first substrate (111, Fig. 5). The reflector 107 of Ha can be considered as a stepwise member by the teaching of Moon that a reflector can compose a stepwise member as shown in Fig. 8.

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to incorporate the retarder and the stepwise member being on opposite sides of said first substrate, as in Ha, into the device of Moon since the mere rearrangement of parts of an invention involves only routine skill in the art, and placing the retarder on the opposite side of a transparent substrate would have no optical difference in effect of the display device.

Regarding **claim 2**, Moon discloses said phase difference forming means has a function of reversing a direction of circularly polarized light by allowing circularly polarized light to pass therethrough twice (see Fig. 8 and para. [0073]).

Regarding **claim 4**, Moon discloses said retarder is a retardation film for delaying phase with $\lambda/4$ (para. [0072-0073]).

Regarding **claim 5**, Moon discloses said stepwise member adjusts a balance between transmittance in said transmissive region and reflectance in said reflective region (see Fig. 8).

Regarding **claim 8**, Moon discloses said retarder is formed on said reflective regions (see Fig. 8), but fails to explicitly disclose said retarder is formed in a main surface outside said liquid crystal panel on the first substrate.

However, Ha discloses the retarder is formed in a main surface outside a liquid crystal panel (100, Fig. 5) on the first substrate.

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to incorporate said retarder being formed in a main surface outside said liquid crystal panel on the first substrate, as in Ha, into the device of Moon since the mere rearrangement of parts of an invention involves only routine skill in the art, and placing the retarder on the opposite side of a transparent substrate would have no optical difference in effect of the display device.

Regarding **claim 9**, Moon discloses said retarder is a retardation film or a phase difference film delaying phase with $\lambda/4$ (para. [0072-0073]).

4. **Claims 6 and 7** are rejected under 35 U.S.C. 103(a) as being unpatentable over Moon et al. (US 2002/0089623 A1) and Ha et al. (US 2001/0017679 A1) as applied to claim 1 above, and further in view of Ozawa et al. (US 2004/0004681 A1), also of record in the IDS.

Regarding **claim 6**, Moon and Ha disclose the limitations of claim 1, as stated above, but fail to explicitly disclose said retarder is an orientation-processed polymer liquid crystal layer.

However, Ozawa discloses a transflective liquid crystal display device (Figs. 1-3) wherein a retarder (20, Figs. 1-3) is an orientation-processed polymer liquid crystal layer (para. [0026, 0029 and 0040-0041]).

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to incorporate said retarder being an orientation-processed polymer liquid crystal layer, as in Ozawa, into the device of Moon and Ha since an orientation-processed polymer liquid crystal layer is well-known and commonly used in the art to form phase difference layers.

Regarding **claim 7**, Moon discloses said retarder delays phase with $\lambda/4$ (para. [0072-0073]), but again, Moon and Ha do not disclose it is a polymer liquid crystal layer.

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Again, Ozawa discloses the retarder is a polymer liquid crystal layer (para. [0026, 0029 and 0040-0041]). Ozawa also discloses the retarder delays phase with $\lambda/4$ (para. [0023-0024]).

It would have been obvious to one having ordinary skill in the art at the time of applicant's invention to incorporate said retarder being a polymer liquid crystal layer, as in Ozawa, into the device of Moon and Ha since an orientation-processed polymer liquid crystal layer is well-known and commonly used in the art to form phase difference layers.

Response to Arguments

5. Applicant's arguments with respect to claim 1 have been considered but are moot in view of the new ground(s) of rejection.

Applicant has amended claim 1 to include the limitation of "said phase difference forming means comprises a retarder and a stepwise member on opposite sides of said first substrate", and has argued that this distinguishes over Moon. Examiner agrees, therefore, the previous 35 USC 102(b) rejection has been overcome. However, this does not appear to be a patentable distinction since Ha discloses this feature, as discussed above. Therefore, the above new grounds of rejection under 35 USC 103(a) are considered appropriate.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAISLEY L. ARENDT whose telephone number is 571-270-5023. The examiner can normally be reached on MON - FRI, 9:00 a.m. - 5:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Robinson can be reached on 571-272-2319. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Paisley L Arendt/
Patent Examiner, Art Unit 2883

/David Nelms/

Supervisory Patent Examiner, Art Unit 2871